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## LIST OF THE BIRDS OF LOUISIANA. PART VI.

BY H. H. KOPMAN.

THE following list is a continuation of a list of the birds of Louisiana published in 'The Auk' by the present writer and Messrs. Andrew Allison and Geo. E. Beyer in 1906-08.<sup>1</sup> The work of publishing this list was suspended with the appearance of the fifth instalment, which embraced the Pici. Owing to changes in the plans of the several authors of the original list, further co-operation became impractical. The present writer has for some time intended to complete the list, however, and has been prevented by other work from doing so earlier. He is glad to present now what he believes are the most important data on the species listed. The bulk of this material is obtained from his own notes and those of Mr. Andrew Allison, to whom, as well as to Prof. Beyer, credit is given in important specific instances demanding it. The migration records from Ariel, Miss., and Lobdell, La., and most of those from Bay St. Louis and Ellisville, Miss., were established by Mr. Allison, who is now living in China.

186. CHUCK-WILL'S-WIDOW (*Antrostomus carolinensis*). Common summer visitor in the higher parts of the State, especially where there are pines. Very rare in the fertile alluvial section of the southeast, and apparently occurring only as a migrant. Personally I have recorded it there only two or three times in over twenty years of observing. In the sections where it is common it arrives about April 10, usually appearing simultaneously with the Nighthawk. Earliest arrival: Covington, La., Apr. 7, 1901. Calls very little after the middle of July, and is little in evidence after Sept. 1. The latest date for departure is a Mississippi record made by Mr. Andrew Allison: Bay St. Louis, Sept. 25, 1899.

187. WHIP-POOR-WILL (*Antrostomus vociferus vociferus*). A transient only. Rare in the fertile alluvial sections. Fairly common in the higher parts of the State. Usually commonest the latter part of September and early part of October. Data on its movements are limited, and comprised chiefly Mississippi records. Seen by Mr. Andrew Allison at Bay St. Louis, Miss., on Sept. 13, 1899, Oct. 21, 1902, and Apr. 1, 1902. Probably remains in the fall until the early part of November, or may winter rarely.

188. NIGHTHAWK (*Chordeiles virginianus virginianus*). Common transient visitor in most parts of the State. Its occurrence as a breeder in the

<sup>1</sup> 1906, pp. 1-15, 275-282. 1907, pp. 314-321. 1908, pp. 173-180, 439-448.

extreme southeastern portion is, however, limited and local. At New Orleans it is not often seen after the spring migration, and is not conspicuous again until at least the middle of August. During the summer of 1909, however, being often in the commercial section of the city in the evenings, I noticed Nighthawks on numerous occasions, sailing above the taller buildings, the flat roofs of which are usually covered with broken shell, and the probability of the bird using such places to nest occurred to me. The majority of such structures, ten and twelve story office buildings, have been erected in New Orleans within the last decade, and they would furnish more nearly the proper nesting sites for the Nighthawk than any other character of surface in the region about New Orleans.

The Nighthawk arrives in southern Louisiana with remarkable regularity. Out of twenty or more dates of arrival, fully two thirds are April 10-12. The remainder are a day or so earlier or later. In the fall, there is a decided increase of transients after the middle of August. The most remarkable flight I have ever seen was observed near Convent, in St. James parish, about fifty miles above New Orleans on the Mississippi river, on Sept. 11, 1894. The flight was heaviest for the half hour preceding sun-down. The birds kept close to the river and were flying downstream, which at that point was about southeast. The Nighthawk becomes rather inconspicuous after the 20th of September. The last are usually seen in the last week of October, and the latest date of which I have a record is Nov. 3, 1895, at Chef Menteur, La.<sup>1</sup>

189. FLORIDA NIGHTHAWK (*Chordeiles virginianus chapmani*). This interesting subspecies has been observed on the shell reefs in the Gulf in the neighborhood of the mouths of the Mississippi which furnish suitable nesting sites. It is also very common in the prairie sections of central southern and southwestern Louisiana. Great numbers may sometimes be seen sailing low or at moderate elevations throughout the day in perfectly clear weather. The same is true of its habits about the Gulf islands.

190. CHIMNEY SWIFT (*Chaetura pelagica*). A common summer visitor. On the whole, however, I do not believe it is as abundant as formerly, at least in the immediate vicinity of New Orleans, which is doubtless due largely to changes in the method of construction of flues. The average date of arrival is about March 18 at New Orleans, though several seasons I have failed to see any until about March 25, and once or twice I have noted none up to April 1. The swift usually becomes common the last week in March. Several seasons its appearance became general March 26. The earliest movements of which I have a record occurred in 1897, the first appearing March 13, and the species becoming abundant March 19. The season was well advanced, but in 1911 which was one of the earliest springs I have ever known, practically nothing was seen of the swift until

<sup>1</sup> [According to Mr. H. C. Oberholser's 'Monograph of the Genus Chordeiles' the Florida Nighthawk is the breeding bird everywhere in the lower Mississippi Valley north to southwestern Kentucky and extreme southern Illinois. It would seem therefore that all notes on summer resident birds in Louisiana must refer to this form and not to *C. v. virginianus*. ED.]

late in the season. As a matter of fact, an early spring in southern Louisiana, from the standpoint of temperature and progress of vegetation, seldom has a pronounced effect on the course of the migrations.

The Chimney Swift is usually more in evidence after the latter part of June than in the late spring and early summer. Numbers are often seen sailing at a moderate height at this time, as though the more pressing duties of the nesting season had been concluded. The first week in July, 1897, I noticed that during the daytime young swifts began to leave a chimney in which they had been reared. About August 15, the year preceding, I observed the same thing at the same location, and have concluded that a second brood is generally reared as soon as the first comes out. In the case of the young birds observed in August, of course, the first brood must have appeared somewhat earlier than in 1897, but I was not on the ground when the first brood might have been expected. In 1897, on the other hand, I did not observe that a second brood was reared where the first was noted. I think the observations of the two seasons, however, indicate very plainly that with the species as a whole, two broods are commonly reared.

The Chimney Swift is very common in southern Louisiana during the latter part of summer and in the early fall. It is usually common also in the early part of October, and in warm weather after the middle of the month, important flights are often seen. The normal date of departure is Oct. 25-28. The latest date of departure recorded is Nov. 4, 1896.

191. RUBY-THROATED HUMMINGBIRD (*Archilochus colubris*). Commonest as a transient, but in the State as a whole it is a fairly common breeder. I have heard of one or two instances of its being seen in winter. In the southern section of the State it is decidedly uncommon as a breeder. Personally I have seen but two nests, one in a live oak in St. James parish, and the other in an elm in St. Mary parish. The latter was found early in July and contained one fresh egg.

While the Hummingbird usually arrives at the latitude of New Orleans within a day or two of March 20, the movements occasionally show considerable aberration. For instance, in 1897, the first was seen March 7, and on the same date in 1902 at New Iberia, La.; while in the latter year, the first was reported by Mr. Andrew Allison from Bay St. Louis, Miss., on Feb. 20. On the other hand, it is not observed some seasons until after the first of April. It usually becomes common, however, the last week in March. There are several decided transient movements later in the spring, and almost invariably a decided influx for a few days between the 5th and 15th of May. These latter movements are always observed when the weather has become suddenly cooler.

Hummingbirds usually show an increase the latter part of August or early part of September. The last is usually seen about the same time as the Nighthawk and Chimney Swift, that is, the last week of October, or first few days of November.

The Hummingbird is often very conspicuous in September on the Gulf

Coast of Mississippi about the growths of "wild sage" (*Calamintha coccinea*) in the pineries.

192. SCISSOR-TAILED FLYCATCHER (*Muscivora forficata*). The occurrence of this species in Louisiana, with the possible exception of the extreme western portion of the State, is decidedly infrequent, not to say casual. I have never had the good fortune to observe it, and I know of no one who has observed it more than a few times. I have seen a specimen killed near New Orleans in the fall, and I think its occurrence is most apt to be noted at that season. It is doubtless present sometimes as a breeder in the western part of the State.

193. KINGBIRD (*Tyrannus tyrannus*). Common everywhere as a transient in Louisiana, especially in the fall, and common as a breeder in most parts of the State. Coastwise, it is commoner as a breeder in the prairie section of the central southern and southwestern portions of the State than in the wet, wooded alluvial region of the southeast. It is rare as a breeder at New Orleans; in fact, I have few records of its occurrence in the region immediately about the city in the breeding season. At various points within thirty miles to the east, south and west, however, I have found it fairly common in the breeding season on several occasions. It is regularly common as a breeder in extreme southern Louisiana, however, west of the Atchafalaya river.

The Kingbird usually arrives at New Orleans the last week in March, the earliest date of arrival being March 23, 1895 and 1904. While a few doubtless always arrive at this time, its appearance does not become general until April 4 or 5, which is the date when the first are usually seen on the Mississippi coast.

The Kingbird is extremely abundant as a transient in southern Louisiana from about August 25 to Sept. 25. It is seldom seen after Oct. 1. I noted a straggler at Biloxi, Miss., however, on Oct. 23, 1905.

In the piney sections of southeastern Louisiana and southern Mississippi, the Kingbird feeds extensively in the fall on the ripened seeds of the two common native magnolias (*M. fatida* and *M. virginiana*). Wherever it finds the former of these two species transplanted in the wet wooded alluvial section of southeast Louisiana, it occurs in the greatest numbers. This is particularly true in the suburban sections of New Orleans, where *M. fatida* is a favorite shade tree, though not a native of the surrounding woods, or swamps, as commonly supposed.

194. ARKANSAS KINGBIRD (*Tyrannus verticalis*). A specimen of this species taken at Mandeville, La., in September, 1914, is in the Louisiana State Museum. The specimen was taken by the taxidermist of that institution, Mr. George Schneider.

195. CRESTED FLYCATCHER (*Myiarchus crinitus*). There is absolutely nothing exceptional with reference to the occurrence of the Crested Flycatcher in Louisiana so far as I have been able to learn. It is not quite so common in the swampy section of the southeast as in other wooded portions of the State, but wherever there is any considerable growth of

trees, it may be counted upon as a regular breeder. The movements in spring are almost identical with those of the Kingbird. The earliest date of arrival I have recorded is March 25, 1900, at Covington, La. The first has frequently been seen on March 30.

This species becomes very inconspicuous after the middle of August. It departs apparently at the same time as the Kingbird, about the last week in September. The latest recorded date of departure is Oct. 15, 1897, when it was observed by Messrs. Andrew and W. B. Allison at Ariel, Amite county, Miss.

196. PHOEBE (*Sayornis phæbe*). A common winter visitor throughout the State. Arrives at the Gulf Coast, Oct. 5 or 6, the movement seldom varying a day from these dates. In 1897, however, I noted one at New Orleans Sept. 25. Departs from the same latitude about April 5 or 6, being as regular at this season as in the fall.

197. OLIVE-SIDED FLYCATCHER (*Nuttallornis borealis*). Extremely rare. I have only three records of its occurrence in Louisiana. Mr. H. L. Ballowe took a specimen at Diamond, Plaquemines parish, Aug. 31, 1894. I noted one at Covington, La., Aug. 16, 1903. Mr. Andrew Allison noted one at New Orleans May 6, 1901. In addition, Mr. Allison has noted the species twice at Bay St. Louis, Miss.: On Mar. 31 and Aug. 29, 1902. It will thus be seen that there is a striking agreement in the records for the fall movement, and that like some other species breeding well to the northward, to which attention will be called when they are reached, it moves south very early.

198. WOOD PEWEE (*Myiochanes virens*). A common breeder throughout the state. Most abundant, however, as a fall transient, occurring in greatest numbers during the first half of October. A heavy wave during this period always includes large numbers of Wood Pewees.

The normal date of arrival at Gulf coast latitude is about April 5, its appearance is usually general about April 10. Occasionally the first is noted before April 1. In 1904, I saw one at New Orleans on March 30; in 1897, Mr. W. B. Allison saw one at New Orleans on March 27 and in 1906 at Bay St. Louis, Miss., on March 25; in 1901 Mr. Andrews Allison saw one at Bay St. Louis on March 31. On the other hand, I failed to see any at New Iberia, La., in 1902 until April 25, and for two successive seasons none was noted until that date at Ellisville, Miss.

Transient Pewees in fall are brought to Gulf coast latitude by a decided wave that usually reaches there the last week in August. The species is common throughout September, and especially so whenever there is a wave during that month. It is sometimes remarkably abundant during the first important wave in October, usually occurring from the 5th to the 10th. The general transient movement is over by Oct. 20. The latest date for departure at New Orleans is Nov. 2.

[YELLOW-BELLIED FLYCATCHER (*Empidonax flaviventris*). While this species undoubtedly occurs as a rare transient in Louisiana, I have never seen it in the State, and do not know of any well authenticated record of its presence.]

199. ACADIAN FLYCATCHER (*Empidonax virescens*). A common summer visitor in swampy woods of every character. It is evenly distributed throughout the wet wooded lands of the fertile alluvial region, and occurs wherever there are river swamps and creek bottoms in other sections. It arrives at New Orleans about April 1. The earliest arrival of which I have a record is March 30, 1904. It becomes common about April 8. It is seen occasionally through most of October. The latest date of departure is Oct. 27, 1900, at Convington.

200. TRAILL'S FLYCATCHER (*Empidonax trailli trailli*).

201. ALDER FLYCATCHER (*Empidonax trailli alnorum*). The similarity of this and the preceding form and the apparently indiscriminate way in which they associate in the lower Mississippi valley make it difficult to distinguish between them in their occurrence and movements. Specimens taken on the Mississippi coast, however, appear to be chiefly if not entirely of the latter of the two forms. Whichever one occurs in the fertile alluvial region of southeast Louisiana, and I am inclined to think it is true *trailli*, is rather rare. It has been noted at New Orleans May 2, and while I believe it has been observed on one or two other occasions, I fail to find any records of these observations. The Alder Flycatcher is rather a common fall transient on the Mississippi coast, where it arrives about Sept. 1. Earliest date of arrival: Aug. 27, 1896, Beauvoir, Miss. Latest date of departure: Oct. 18, 1901, Bay St. Louis, Miss. No records for spring migration.

202. LEAST FLYCATCHER (*Empidonax minimus*). Not particularly common at any points in southern Louisiana and southern Mississippi where I have made observations, and decidedly rare in the fertile alluvial region of southeastern Louisiana. Arrives at Gulf coast latitude the early part of September. Earliest: Sept. 1, 1900, Bay St. Louis, Miss. The only dates on which I have recorded it in spring in Louisiana are April 6, 1895, at New Orleans, and March 30 and May 9, 1902, at New Iberia, La.

203. PRAIRIE HORNED LARK (*Otocoris alpestris praticola*). This is doubtless the form to which reference is had in a list of the birds of Louisiana by Prof. Geo. E. Beyer, who records the fact of a specimen having been taken and a number having been seen by Gustave Kohn along the shore of Lake Pontchartrain near Mandeville on Jan. 6, 1879. I do not know of any other record of the occurrence of this bird in Louisiana.

204. FLORIDA BLUE JAY (*Cyanocitta cristata florincola*). Whether the typical Blue Jay occurs in Louisiana I do not know, but this is undoubtedly the only form present in the southern section of the State. It is not so common in the fertile alluvial region of the southeast as elsewhere, its distribution being somewhat irregular in that section. A rather peculiar feature of its occurrence in this region is the fluctuation of its numbers in the suburban districts of New Orleans. For several years together, it may be rather common there, and then disappears almost entirely for an equally extended period. Thus, while a resident in this region it is evidently rather nomadic. In the prairie section of central southern Louisi-

ana the Blue Jay is common wherever there are groves or patches of woods. In the town of New Iberia, I found it exceedingly numerous in the winter of 1901-02.

205. AMERICAN CROW (*Corvus brachyrhynchos brachyrhynchos*). A resident throughout the State but not quite as common coastwise as the Fish Crow, being confined in that portion of the State, as a rule, to well wooded or cultivated lands. Somewhat commoner coastwise in winter than at other seasons.

206. FISH CROW (*Corvus ossifragus*). Abundant coastwise, apparently not occurring very far inland. It is most abundant in wet, open grounds. Nesting appears to be somewhat later than that of the preceding species, beginning the latter part of March.

207. BOBOLINK (*Dolichonyx oryzivorus*). Appears with considerable regularity in the coast section in fall, especially in the rice fields. Rather rare during most of the spring, but sometimes occurring plentifully for a few days late in the season.

The earliest record for fall arrival is Aug. 22, 1894, at Diamond, Plaquemines parish. It becomes common about Sept. 20. I have no data on the departure of fall transients.

The earliest date of spring arrival is April 4, 1894, at Avery Island, and the latest date of departure is May 2, 1903, at Lobdell, West Baton Rouge parish. Small flocks of transients in song are not unusual about May 1. about cultivated lands in the southeastern part of the State.

208. COWBIRD (*Molothrus ater ater*). Represented in the State by two distinct forms, typical *M. ater*, which in the southern section, at least, is only a winter bird, and a decidedly smaller bird, which I have found in summer in the southern portion of the State, especially to the north and west of New Orleans. This breeding bird is fairly common. The typical *M. ater* occurs rather irregularly in winter, sometimes in good sized flocks, from about the middle of November to the latter part of March. The form breeding in southern Louisiana is an inch or more smaller than typical *M. ater*.

209. YELLOW-HEADED BLACKBIRD (*Xanthocephalus xanthocephalus*). Except in the western portion of the State, where it is said to occur in winter, this species can hardly be considered as more than an accidental visitor.

210. RED-WINGED BLACKBIRD (*Agelaius phoeniceus phoeniceus*).

211. FLORIDA RED-WING (*Agelaius phoeniceus floridanus*). The comparative status of the typical form and the Florida Red-wing as breeders I am unable to define. I know nothing peculiar with reference to the occurrence of this species as a whole in Louisiana. It occurs by myriads in the marshes in summer, and is found in winter in greatest numbers in the swamps and woods, where it occurs in large flocks, often mixed with those of Cowbirds, Grackles and Rusty Blackbirds. Nesting is usually well under way by the latter part of April.

[MEADOWLARK (*Sturnella magna magna*). May occur as a winter visitor in the more northern parts of the State].



212. SOUTHERN MEADOWLARK (*Sturnella magna argutula*). Common resident of the State, but rather irregularly distributed in the fertile region of the southeast. More or less common in that section in the neighborhood of cultivation, especially on the sugar plantations. Even among resident birds there are decided differences in size and coloring. In the Bayou Teche section I have taken some very small, dark-colored birds in summer. These are noticeably different from other specimens taken in winter in the southern part of the State, though I believe that the latter were of the same subspecies and represented a breeding form in some portion of the State if not in the localities where taken.

213. ORCHARD ORIOLE (*Icterus spurius*). The most conspicuous summer visitor in the fertile alluvial section of southeastern Louisiana. Occurs in the greatest profusion in practically all situations except the unbroken swamps, but is most abundant in the vicinity of habitation and cultivation. Is abundant along ditches, bayous, canals, etc., in the open marsh, and on grassy, bushy islands along the coast. Occurs also in greater or less abundance in all other portions of the State in the vicinity of cultivation, but seldom in the forests and swamps.

Its abundance as a breeder in the southeastern portion of the State, however, can scarcely be comprehended by those whose acquaintance with it is confined to its appearance in more northern localities. In one live oak in a plantation yard where there were many more trees of this kind I once counted nearly twenty nests of this species.

The average date of arrival of the male at New Orleans is March 25. The first female arrives usually about April 5, and the male becomes common at the same time. The females become common in a few days. The first male may be either a second-year or a mature bird, but in either case is almost invariably singing.

Nesting is usually started shortly after April 20. The construction of the nest is rather deliberate. While nesting is usually well started by the first part of May, there are decided discrepancies in the time. The three following cases noted in a single season will illustrate these discrepancies: Nest No. 1—May 9, nest discovered and apparently complete; May 13, contained 3 eggs; May 14, complement of 4 eggs complete; May 27, contained young, apparently two days old. Nest No. 2.—Discovered May 22, contained no eggs. Nest No. 3—Discovered May 22, contained young about 5 days old.

There is almost if not quite as much variation in the time of rearing the second brood. On July 8 I have found a nest with a complement of fresh eggs and the next day two nests with young.

Orchard Orioles begin to flock in southern Louisiana and Mississippi in the latter half of July. The song is seldom heard after Aug. 1. In 1912, however, I heard one sing on Sept. 12.

This species becomes inconspicuous at Gulf coast latitude after the middle of August, though little companies of them may be in evidence for a few days at a time at intervals until Sept. 10 or 15. Such transients usually

form part of slight waves including other species. The latest date of departure is Sept. 26, 1914, near Poydras, St. Bernard parish. The average date of departure is about Sept. 15.

During 1912, 1913 and 1914 I made some notes on the time of the first singing of this species in the morning: 1912—April 25, first song at 4.40, morning clear; April 26, first song at 4.50, morning cloudy; June 14, first song at 4.20, morning clear; July 14, first song at 4.40, morning partly cloudy. 1913—April 27, first song at 4.50, morning clear; May 8, first song at 4.30, morning clear. 1914—June 6, first song at 4.10, morning clear.

214. BALTIMORE ORIOLE (*Icterus galbula*). A rather common summer visitor in the northern half of the State; breeds sparingly as far south as the latitude of Baton Rouge and Opelousas. Throughout the remaining portion of the State, it is known only as a rather rare and irregular spring transient, being practically unknown in fall. A pronounced bird wave about April 20 will usually be found to include this species. The following records of the appearance of this species in Louisiana and Mississippi in spring were made by the writer and Mr. Andrew Allison: 1899, April 1, Bay St. Louis, Miss.; April 13, 1902, New Iberia, La.; April 14, 1902, Bay St. Louis, Miss.; April 10, 1906, Ellisville, Miss.; April 17, 1907, Ellisville, Miss.; April 6, 1908, Jackson, Miss.; April 9, 1911, New Orleans, La. I have also four or five records of its occurrence between April 20 and April 25 at New Orleans and other south Louisiana points. The only record I have for fall transients near the Gulf coast is the occurrence of several at Biloxi, Miss., on Sept. 4, 5, 1905.

215. RUSTY BLACKBIRD (*Euphagus carolinus*). A common winter visitor, sometimes occurring in very large flocks, in fact I have seen flocks on the wing in the sugar country of southeast Louisiana in winter that stretched out for more than a mile. Frequents both the thick swamps and more or less open cultivated country, especially in spring. It becomes abundant in fall in southern Louisiana with the first heavy frosts the latter part of November or early part of December. The earliest record for arrival is Covington, La., Nov. 17, 1899. The earliest Mississippi records are, Ariel, Amite Co., Nov. 9, 1897, and Ellisville, Jones Co., Nov. 9, 1906.

The Rusty Blackbird remains common late in the spring, and at New Orleans I have seen fair-sized flocks about the borders of pastures until April or even May 1. The latest date for departure at New Orleans is May 10, 1899.

216. BREWER'S BLACKBIRD (*Euphagus cyanocephalus*). A rather rare winter visitor. I killed one from a flock of Rusty Blackbirds near Convent, St. James parish, on Dec. 23, 1893.

217. FLORIDA GRACKLE (*Quiscalus quiscula aglaeus*). This is the only form of the common Crow Blackbird that occurs in the swampy coastal section of the State, so far as I have been able to learn. It is abundant and occurs in practically all situations except the open marsh. It is often found in great flocks in the wet woods in winter and early spring. It nests

chiefly in the neighborhood of habitation, especially in groves of live oaks, and water oaks. Nesting begins early in April. The birds recorded by Dr. F. W. Langdon as *Q. purpureus* in the Journal of the Cincinnati Society of Natural History, Vol. IV, 1881, which were breeding at Baton Rouge were apparently referable to this form.

218. BRONZED GRACKLE (*Quiscalus quiscula æneus*). Never occurs, as far as I have been able to determine, in the section where the Florida Grackle is found. It is a fairly common breeder in the interior and northern portions of the State. I found it breeding commonly in Madison parish in 1896. Its numbers doubtless increase in winter.

219. BOAT-TAILED GRACKLE (*Megaquiscalus major major*). A strictly coastal species in Louisiana as far as I have observed. I doubt whether it ever occurs more than fifty miles inland. In summer it is confined to the marshes and very wet swamp lands. In the fall considerable numbers move on to the drained and cultivated lands. As with the Florida Grackle, nesting begins in the early part of April. In Audubon Park, New Orleans, a curious relationship between the movements of these two species is noted at this time. The numbers of the Florida Grackles increase in the park, numerous individuals arriving from the swamps to nest in the oaks of the park, while the Boat-tailed Grackles, which are present in large numbers on the meadowy stretches of the park throughout the winter, move off to their nesting sites in the marshes south of the city.

220. PURPLE FINCH (*Carpodacus purpureus purpureus*). Fairly common winter visitor except in the southern portion of the State, where it has been found only in severe winters. Numbers were seen at several points in the suburbs of New Orleans and in the woods near the city after Jan. 1, 1895. The last were seen March 23. In 1897, the first arrived at Ariel Amite County, Miss.; on Nov. 13. In 1901, the first arrived at Bay St. Louis, Miss., on Dec. 4, and the species became common Dec. 16.

221. AMERICAN GOLDFINCH (*Astragalinus tristis tristis*). Common winter visitor in all sections of the State. Doubtless breeds sparingly in the northern counties, as it certainly does in corresponding latitude in Mississippi. Its movements southward in fall, however, are rather late. Some records of fall arrival follow: Ellisville, Miss., Nov. 6, 1906; Ariel, Miss., Nov. 10, 1897; Covington, La., Nov. 12, 1899; New Orleans, Nov. 19, 1898. In September, 1907, I noted Goldfinches about Jackson, Miss., and in August I had seen them very little further north.

The latest date for spring departure at New Orleans is April 11, 1894 and 1896. At Bay St. Louis, Miss., the latest date of departure is April 23, 1902.

222. PINE SISKIN (*Spinus pinus*). A rather irregular and usually rather uncommon winter visitor, seldom reaching the fertile alluvial region of southeastern Louisiana. The earliest date of arrival of which I have any record is Nov. 29, 1908, at Woodville, Miss., and the latest date of departure is April 19, 1902, at Bay St. Louis, Miss.

223. VESPER SPARROW (*Poæcetes gramineus gramineus*). A common

but seldom abundant winter visitor. Least common in the fertile alluvial region in the southeastern part of the State. In 1899, the first was seen at Covington, La., on Nov. 2, and that is about the average time of arrival at that latitude. The last was reported in 1902 at Lobdell, West Baton Rouge parish on March 20, 1903.

224. SAVANNAH SPARROW (*Passerculus sandwichensis savanna*). Common winter visitor, particularly abundant in cultivated lands in the southeastern part of the State. Arrives at New Orleans usually during the first week in October, and becomes common by Oct. 15 or 20. A few may arrive sometimes shortly before Oct. 1, but I have no satisfactorily verified records showing such to be the case. Remains common until the latter part of April. Records for last seen are: May 9, 1897, New Orleans; May 12, 1903, Lobdell.

225. GRASSHOPPER SPARROW (*Ammodramus savannarum australis*). Probably occurs throughout the State as a summer visitor in the vicinity of cultivation. All records I have regarding it, however, were made in the fertile alluvial region of the southeast. It was formerly common in summer in the meadowy portion of Audubon Park, New Orleans, but I have not seen it there for ten or twelve years. Twenty years ago I found it most abundant on a sugar plantation in St. James parish. Though said to winter in Louisiana, I have never seen it except in summer. Records of arrival are: April 3, 1898, New Orleans; April 4, 1897, New Orleans (became common); April 4, 1903, Lobdell; April 8, 1895, New Orleans.

226. HENSLOW'S SPARROW (*Passerherbulus henslowi henslowi*). Have noted this species on two occasions at Covington, and think close search would prove it to be fairly common and regular in grassy pine woods in winter. The dates of observation at Covington are Nov. 2, 1899, and Jan. 23, 1905. Mr. Andrew Allison noted it at Ariel, Miss., Oct. 9, 1897, and at New Orleans, Nov. 30, 1899.

227. LECONTE'S SPARROW (*Passerherbulus lecontei*). I have never seen this species, but Mr. Andrew Allison noted one at Lobdell on April 23, 1903. He also saw about eight at Ariel, Miss., on Nov. 15, and made subsequent observations of it there.

228. NELSON'S SPARROW (*Passerherbulus nelsoni nelsoni*). I found this species in great abundance on Marsh Island on May 16, 1907, and on May 19 observed it and took a specimen at Sabine Pass. These may all have been migrants, as I have not observed it later in the year at other points on the coast, but on that supposition, the lateness of the date is rather remarkable.

229. LOUISIANA SEASIDE SPARROW (*Ammodramus maritimus fisheri*). An extremely abundant breeder in all tidewater marshes. I have seen scores at a time in the rushes and marsh grasses, perched just below the level of the grass tops, delivering in more or less regular concert their strange monotonous songs. The usual song sounds like "te-dunk-chee-e-e-e." Sometimes the trill alone is given. A nest found on Battledore Island,

July 23, 1908, contained four young a few days old. It was built of grass and the opening, on the side, was rather large. It was four feet from the ground in *Avicennia nitida*, a bush that is common along the coast.

230. LARK SPARROW (*Chondestes grammacus grammacus*). Occurs casually and at various seasons in the eastern part of the State. It is doubtless a resident wherever found, and I think it is likely it will be found fairly common in the western part as well. Have noted it also on the coast of Mississippi. In Louisiana I have seen it in Madison, Caldwell, St. James, Plaquemines and St. Mary parishes.

231. WHITE-CROWNED SPARROW (*Zonotrichia leucophrys leucophrys*). A decidedly rare bird in most if not all parts of the State. Have noted it in the late autumn and late spring but never in midwinter. Noted several adult males in song at New Orleans on May 1 and 2, 1897, an immature bird at Covington, Nov. 25, 1899, and an immature bird at Biloxi, Miss., Nov. 10, 1905.

232. WHITE-THROATED SPARROW (*Zonotrichia albicollis*). A very abundant winter visitor, especially in the wooded alluvial portion of the southeast. The earliest fully verified record of arrival is Oct. 13, 1900, at Covington, and it was seen on the same date in 1897 at Ariel, Amite county, Miss. It becomes fairly common about the end of October, and very common in November with the first cold weather. It remains common until the early part of April, and the last is usually seen a few days after April 20. The latest date of departure is April 27, 1903, at New Orleans.

233. CHIPPING SPARROW (*Spizella passerina passerina*). This species is entirely absent from the fertile alluvial region of the southeastern part of the State, in the prairie section, and doubtless in all low wooded lands along the Mississippi river similar to those in the southeast. In the pineries and wooded uplands it is a common resident, increasing very much in numbers in winter, of course, especially in the pineries of the southern part of the State. It became common at Covington, Nov. 11, 1899, at Ariel, Miss., Oct. 25, 1897, at Bay St. Louis, Miss., Oct. 31, 1901, and at Biloxi, Miss., Nov. 15, 1905. The bulk of winter visitors left Ellisville, Jones county, Miss., April 15, 1907.

234. FIELD SPARROW (*Spizella pusilla pusilla*). Never very common in the lowland sections of the State; breeds as far south as West Baton Rouge parish, however. Does not breed on the coast of Mississippi. The first was seen at Biloxi, Miss., Oct. 6, 1905, and there was a marked influx of winter visitors at Gulfport, Miss., Oct. 22, 1910.

235. SLATE-COLORED JUNCO (*Junco hyemalis hyemalis*). Decidedly rare in the extreme southern part of the State. Fairly common in winter at Covington. In 1897, the first was seen at Ariel, Miss., on Nov. 12. In 1907, the last was seen at Ellisville, Miss., on March 31.

236. BACHMAN'S SPARROW (*Peucaea aestivalis bachmani*). A fairly common resident in the pineries and in mixed upland growths of hardwood and pine, especially in small oak and pine thickets. Sings chiefly in the late winter, spring and early summer, being heard often in concert with the Pine Warbler.

237. SONG SPARROW (*Melospiza melodia melodia*). A rare bird in the lowland section of the State. In fact, the only record of which I have any knowledge is that of a specimen taken near New Orleans in the early part of March by Mr. Andrew Allison. In the winter of 1905-06, I noticed the first at Biloxi, Miss., Oct. 24, and the last on March 12.

[LINCOLN'S SPARROW (*Melospiza lincolni lincolni*). This species, so far as I know, has never been observed in Louisiana. It has been taken in spring in north Mississippi, however, by Mr. Andrew Allison.]

238. SWAMP SPARROW (*Melospiza georgiana*). In suitable locations, this is probably the most abundant winter visitor to the southern section of the State except the Myrtle Warbler. It is remarkably abundant in fresh water marshes, the edges of swamps and all undrained, overgrown places. The earliest record of arrival at New Orleans is Oct. 3, 1894, and it was common there Oct. 9, 1903. The first is usually seen in southern Louisiana and southern Mississippi about Oct. 8. Like the White-throated Sparrow it remains common until the early part of April. The last is seen a little later, usually about May 1. The latest date of departure is May 3, 1898, at New Orleans.

239. FOX SPARROW (*Passerella iliaca iliaca*). Rare in the southern part of the State. Several were seen and a specimen taken by Mr. Andrew Allison in a briery pasture on the edge of a wood on well drained land near New Orleans on Feb. 22, 1897. This is the only record of its occurrence in the southern part of the State of which I know. It has been reported as rather common in north Louisiana in winter.

240. TOWHEE (*Pipilo erythrophthalmus erythrophthalmus*). Resident; fairly common in most sections of the State; in the fertile alluvial section of the southeast it is found chiefly about the plantations or in woods better drained than the average timbered lands. In the prairie section it is a common and rather conspicuous inhabitant of mixed growths of briers, canes, etc. Individuals show remarkable attachment to the comparatively few spots in the fertile alluvial region where they occur. An unusually well drained piece of woodland near New Orleans that I have visited repeatedly in the past twenty years is practically the only spot in an area of 15 or 18 square miles where I have always been practically certain of seeing this bird.

241. CARDINAL (*Cardinalis cardinalis cardinalis*). Rivalled only by the Mockingbird and Carolina Wren among the smaller birds of the State in absolutely uniform abundance in every section.

242. ROSE-BREASTED GROSBEAK (*Zamelodia ludoviciana*). Occasionally common in migration, either spring or fall, for a day or two at a time. In southern Louisiana, it is most apt to be noted the latter part of April and early part of October. The latest date of its occurrence at New Orleans in spring is May 6, 1897. Have never noted it in early spring, and in fact have no record of its occurrence before April 21. The earliest date of its occurrence in fall at New Orleans is Oct. 6, 1894. One was seen at Ellisville, Miss., Oct. 19, 1897.

243. BLUE GROSBEAK (*Guiraca caerulea caerulea*). Only transient in the southern part of the State, and never common in the fertile alluvial region and probably not common at any time in the prairie section. Just how far south it breeds in Louisiana I do not know, but it has been found breeding in central Mississippi. Has been found commonest in Louisiana about cultivated lands in the piney regions of the southern portion of the State. The earliest record of arrival at New Orleans is April 8, 1898. The latest date of occurrence in spring is May 7, 1897. The earliest date of arrival in fall at New Orleans is Aug. 28, 1899, and this has been found to be about the average date of its arrival on the coast of Mississippi, where it is fairly common in fall. In 1905, the last was seen at Biloxi, Miss., Oct. 22.

244. INDIGO BUNTING (*Passerina cyanea cyanea*). Summer visitor, but not very common breeder in the southern part of the State; more common, however, in the fertile alluvial section than in the piney regions, being found sparingly on the sugar plantations and about other cultivation. Extremely abundant as a transient in the fertile alluvial section in both spring and fall, and in the piney sections in fall. The earliest date of arrival at New Orleans is March 26, 1899, and the first usually comes about March 30. It becomes common about the end of the first week in April, and usually reaches the height of its abundance from April 15 to 20. In the fall, the first transient is usually seen at New Orleans about Sept. 22. It is usually most abundant the second week in October, but is variably plentiful from about Oct. 5 to Oct. 18 or 20. The last is usually seen at New Orleans a few days after Oct. 20. At Biloxi, Miss., I saw one Nov. 1, 1905. The following notes of its occurrence at Covington, La., were made in 1899: "Greatest number came Oct. 6. Few of these were left Oct. 12. A second "wave" came Oct. 21. Last, Oct. 27."

245. PAINTED BUNTING (*Passerina ciris*). Summer visitor, commonest in the central southern and southwestern part of the State. In the prairie lands of St. Mary, Iberia, St. Martin and Lafayette parishes, it reaches its greatest abundance. It is decidedly common, however, throughout the cultivated lands of the fertile alluvial region of the southeast. The earliest record of arrival is March 23, 1894, Convent, La. It is seldom seen after the latter part of September. One was noted, at New Orleans, however, Oct. 26, 1895. Males in perfect plumage may be seen up to the time of the general departure of the species, and the late bird noted above was a male in full plumage.

246. DICKCISSEL (*Spiza americana*). When I began systematic observation of the birds of the State in 1893, this was a common spring transient at New Orleans, being noted in that year, and in the two years following. Subsequent to 1895, however, none was seen at New Orleans until 1899 and then not again until 1912. In all the seasons in which it was seen at New Orleans, it was present in Audubon Park as a late April transient. In some of these seasons, it was seen also elsewhere. Found this species breeding on the edge of a pasture in St. Mary parish in 1895, and the same

year I saw a female, apparently near a nest, in Audubon Park the latter part of May. I have found it in summer also in Cameron parish, near the mouth of the Calcasieu river. The earliest date of arrival at New Orleans is April 18, 1895. I have no records of the fall movements.

(To be concluded.)

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## ANATOMICAL AND OTHER NOTES ON THE PASSENGER PIGEON (*ECTOPISTES MIGRATORIUS*) LATELY LIVING IN THE CINCINNATI ZOÖLOGICAL GARDENS.

BY DR. R. W. SHUFELDT.

### *Plates IV-VI.*

On February twenty-first, 1914, Mr. S. A. Stephan, General Manager of The Cincinnati Zoölogical Company, of Cincinnati, Ohio, wrote me that "Our Passenger Pigeon has been promised to the Smithsonian Institution when it dies. This bird is a female and now about 29 years old, and the last one of a flock of eight that we got in 1878." I have since learned that it was hatched in the Garden.

The specimen of which Mr. Stephan speaks was, beyond all reasonable doubt, the last living representative of its race in the world,—the last, the very last, of the millions upon millions of those birds which were known to pass over certain sections of the United States during their migrations to and from their feeding and breeding grounds. Many of us, whose birthdays date back to the middle of the last century and before, and who resided in the districts where these vast unnumbered hosts of migrating "blue pigeons" darkened the heavens for days at a time, distinctly remember the cruel, unnecessary slaughtering of those birds, untold thousands of which were never used for any purpose whatever; millions of others of which were slain for their feathers alone, while it is now impossible to form any correct estimation of the number